

# Wisconsin Petroleum Use, by Economic Sector

## 1970-2010 TRILLIONS OF BTU AND PERCENT OF TOTAL

Year	Residential		Commercial		Industrial		Agricultural <sup>a</sup>		Transportation		Electric Utility		Total	Total End Use
1970	107.9	23.6%	31.5	6.9%	21.1	4.6%	18.1	4.0%	271.2	59.3%	7.9	1.7%	457.7	449.8
1975	87.6	18.4%	27.5	5.8%	19.3	4.1%	18.8	4.0%	314.0	66.1%	7.8	1.6%	475.0	467.2
1980	71.2	15.7%	14.6	3.2%	13.2	2.9%	21.4	4.7%	329.2	72.4%	4.8	1.1%	454.4	449.6
1985	51.7	12.5%	16.0	3.9%	9.4	2.3%	19.2	4.7%	314.4	76.3%	1.4	0.3%	412.0	410.7
1990	42.6	9.6%	15.0	3.4%	22.1	5.0%	16.0	3.6%	347.7	78.2%	1.0	0.2%	444.4	443.4
1995	40.8	8.6%	13.4	2.8%	18.5	3.9%	15.6	3.3%	384.2	81.2%	0.8	0.2%	473.4	472.5
1996	43.5	8.9%	14.2	2.9%	20.9	4.3%	15.9	3.3%	393.1	80.5%	0.9	0.2%	488.5	487.6
1997	40.5	8.2%	13.1	2.7%	20.8	4.2%	15.3	3.1%	401.5	81.5%	1.6	0.3%	492.7	491.2
1998	33.9	6.9%	10.8	2.2%	19.1	3.9%	14.5	3.0%	411.3	83.7%	1.8	0.4%	491.4	489.6
1999	36.6	7.2%	11.7	2.3%	21.2	4.2%	15.0	2.9%	422.2	83.0%	2.0	0.4%	508.6	506.6
2000	38.8	7.7%	12.1	2.4%	20.5	4.1%	14.4	2.9%	416.0	82.6%	1.6	0.3%	503.5	501.9
2001	36.7	7.3%	11.6	2.3%	25.0	4.9%	14.0	2.8%	417.5	82.5%	1.3	0.3%	505.9	504.6
2002	38.0	7.4%	11.8	2.3%	19.3	3.7%	14.4	2.8%	430.1	83.4%	2.1	0.4%	515.6	513.5
2003 <sup>r</sup>	37.3	7.4%	10.6	2.1%	8.7	1.7%	14.5	2.9%	430.3	85.6%	1.3	0.3%	502.7	501.5
2004 <sup>r</sup>	36.6	7.1%	9.8	1.9%	10.8	2.1%	14.0	2.7%	438.7	85.8%	1.5	0.3%	511.4	509.9
2005 <sup>r</sup>	34.5	6.9%	13.3	2.7%	18.2	3.6%	13.6	2.7%	417.9	83.7%	1.8	0.4%	499.2	497.4
2006 <sup>r</sup>	35.3	7.2%	10.5	2.1%	16.6	3.4%	17.2	3.5%	412.5	83.6%	1.4	0.3%	493.5	492.1
2007 <sup>r</sup>	32.8	6.6%	10.7	2.1%	18.5	3.7%	19.0	3.8%	415.2	83.4%	1.9	0.4%	498.1	496.2
2008 <sup>r</sup>	32.5	7.2%	11.8	2.6%	13.4	3.0%	17.9	4.0%	372.6	82.9%	1.1	0.2%	449.3	448.2
2009 <sup>r</sup>	29.4	6.9%	10.6	2.5%	7.4	1.8%	21.6	5.1%	354.4	83.6%	0.6	0.1%	423.9	423.4
2010 <sup>p</sup>	25.5	6.0%	8.0	1.9%	5.3	1.2%	18.4	4.4%	366.2	86.4%	0.5	0.1%	423.8	423.3

OVERALL  
PETROLEUM  
USE  
**STAYED  
LEVEL**

Overall petroleum use, measured in British thermal units (Btu), stayed level between 2009 and 2010. Most of the petroleum is used in the Transportation sector, 86.4 percent of the petroleum used in Wisconsin was for transportation, which saw an increase of 3.3 percent.

Agriculture sector numbers do not include agricultural processing plants; these are classified in the commercial sector.

Numbers for 2003-2009 for the Residential, Commercial and Industrial sectors have been revised based on federal Energy Information Administration data.

<sup>a</sup> The SEO discontinued a per-acre approach to gathering fuel data for the agriculture sector and substituted data from the Wisconsin Department of Revenue and the federal National Agriculture Statistics Service (NASS). Data from NASS were not available previous to 2005.

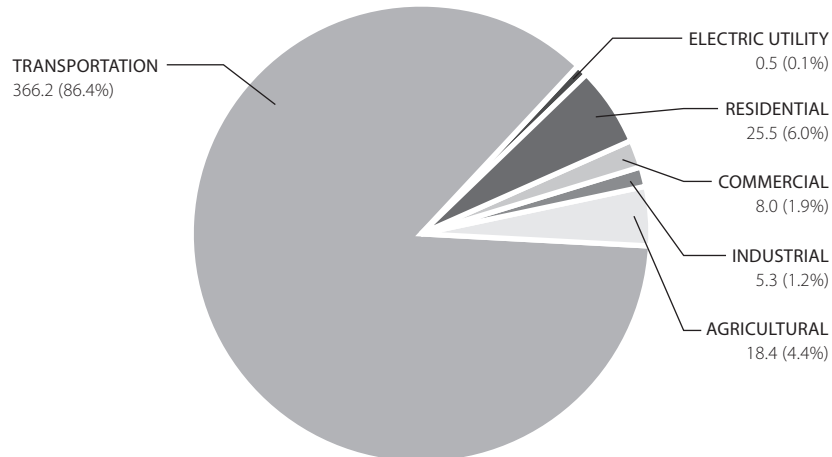
<sup>p</sup> Preliminary estimates.

<sup>r</sup> Revised.

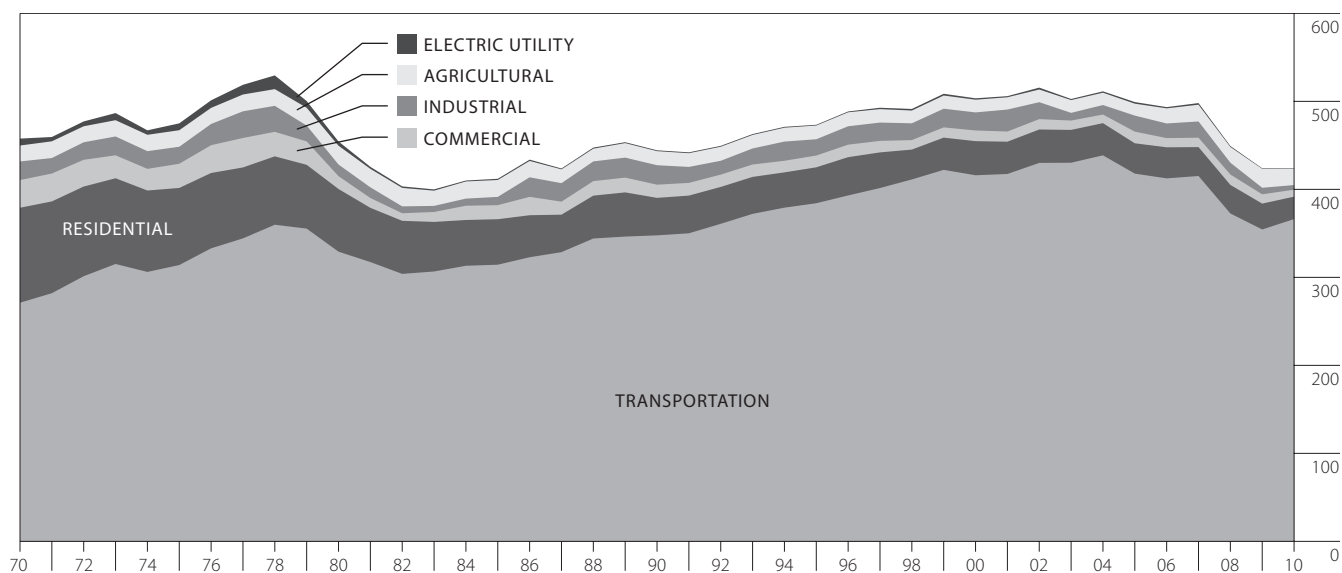
**Source:** Wisconsin Department of Commerce, Bureau of Petroleum Inspection, *Report on Petroleum Products Inspected and Delivered to Wisconsin* (1970-1995); Wisconsin Department of Revenue, *Collection of Petroleum Inspection Fees* (1996-2006) and *Fuel Tax Statistical Report* (1996-2010); Office of Energy Independence phone surveys of airport fixed base operators (1997-2009) and railways (1997-2010); US Department of Energy, Form EIA-782C, "Monthly Report of Petroleum Products Sold Into States for Consumption" (1983-2010); US Department of Energy, Form EIA-821 (2003-2010); unpublished data from the National Agriculture Statistics Service (2005-2010).

# Wisconsin Petroleum Use, by Economic Sector

2010 TRILLIONS OF BTU AND PERCENT OF TOTAL



1970-2010 TRILLIONS OF BTU



Source: Wisconsin State Energy Office.

# Wisconsin Petroleum Use, in Btu, by Type of Product

1970-2010 TRILLIONS OF BTU

Year	Gasoline <sup>a,b</sup>	Jet Fuel	Light Distillate	Middle Distillate	Residual Fuel Oil	LPG <sup>c</sup>	Total
1970	244.1	7.7	35.1	123.4	21.9	25.7	457.9
1975	275.4	9.8	16.9	133.5	13.3	26.0	474.9
1980	271.3	11.0	11.3	124.7	11.0	25.2	454.5
1985	254.2	8.4	13.4	110.7	2.3	23.1	412.1
1990	267.5	11.0	10.8	122.4	7.9	24.8	444.4
1995	283.3	10.6	9.8	131.3	7.6	30.9	473.4
1996	290.0	11.1	10.4	136.2	6.8	34.2	488.7
1997	294.7	11.3	10.7	137.4	6.8	31.8	492.7
1998	301.3	11.5	10.9	135.5	4.9	27.3	491.3
1999	309.2	11.8	11.4	142.0	5.0	29.4	508.8
2000	303.9	11.8	11.3	141.1	5.3	30.3	503.7
2001 <sup>r</sup>	306.3	11.5	11.4	142.2	5.6	29.2	506.2
2002	316.7	11.9	11.2	141.5	4.3	30.1	515.7
2003 <sup>r</sup>	318.6	11.6	12.0	127.0	5.9	27.7	502.8
2004 <sup>r</sup>	319.4	12.5	12.5	132.0	6.9	28.3	511.7
2005 <sup>r</sup>	309.3	14.3	11.4	128.7	8.0	27.5	499.2
2006 <sup>r</sup>	299.2	13.9	11.4	133.0	4.3	31.8	493.5
2007 <sup>r</sup>	304.3	12.8	10.3	134.8	4.6	31.3	498.1
2008 <sup>r</sup>	260.0	13.8	10.5	129.8	3.8	31.3	449.3
2009 <sup>r</sup>	257.8	11.8	9.1	111.3	0.7	33.2	423.9
<b>2010<sup>p</sup></b>	<b>261.3</b>	<b>13.1</b>	<b>9.5</b>	<b>111.0</b>	<b>0.6</b>	<b>28.4</b>	<b>423.9</b>

Middle distillate, which decreased by 0.3 percent since 2009, is used both as a heating fuel in furnaces and boilers, and as diesel fuel in trucks. Light distillate, which increased by 3.8 percent since 2009, includes kerosene and is primarily used as a thinner during periods of cold weather.

<sup>a</sup> Includes both vehicle and aviation gasoline.

<sup>b</sup> Does not include ethanol. Ethanol use in motor gasoline is shown in the Renewable Energy chapter and later in this chapter.

<sup>c</sup> Liquefied petroleum gas (propane).

<sup>p</sup> Preliminary estimates.

<sup>r</sup> Revised.

**Source:** Wisconsin Department of Commerce, Bureau of Petroleum Inspection, *Report on Petroleum Products Inspected and Delivered to Wisconsin* (1970-1995); Wisconsin Department of Revenue, *Collection of Petroleum Inspection Fees* (1996-2006) and *Fuel Tax Statistical Report* (1996-2010); U.S. Department of Energy, Form EIA-782C, "Monthly Report of Petroleum Products Sold into States for Consumption" [http://www.eia.gov/oil\\_gas/petroleum/data\\_publications/prime\\_supplier\\_report/psr\\_historical.html](http://www.eia.gov/oil_gas/petroleum/data_publications/prime_supplier_report/psr_historical.html). (1983-2010); WI Office of Energy Independence telephone surveys of airport fixed base operators (1997-2009) and railways (1997-2010); unpublished expenditure data from the National Agriculture Statistics Service (2005-2010).

# Wisconsin Petroleum Use, in Gallons, by Type of Product

GASOLINE  
USE**1.4%**

JET FUEL

**11.5%**

In 2010, gasoline use  
increased by 1.4 percent  
and jet fuel increased  
by 11.5 percent.

LP USE

**14.6%**

LP use decreased by  
14.6 percent.

## 1970-2010 MILLIONS OF GALLONS

Year	Gasoline <sup>a,b</sup>	Jet Fuel	Light Distillate	Middle Distillate	Residual Fuel Oil	LPG <sup>c</sup>	Total
1970	1,953.0	56.7	260.2	889.7	146.2	269.0	3,574.8
1975	2,203.5	72.4	125.0	962.8	88.8	272.6	3,725.1
1980	2,170.5	81.4	83.4	899.4	73.5	264.1	3,572.3
1985	2,033.3	62.2	94.6	803.9	15.2	241.5	3,250.7
1990	2,139.5	81.6	77.4	885.8	52.2	260.2	3,496.8
1995	2,266.6	78.6	74.9	943.8	50.5	323.8	3,738.1
1996	2,319.8	82.0	77.4	982.0	45.2	357.9	3,864.3
1997	2,357.4	84.0	79.3	990.5	45.6	332.9	3,889.6
1998	2,410.3	85.0	80.8	976.6	32.8	285.9	3,871.4
1999	2,473.7	87.4	84.1	1,024.2	33.1	307.7	4,010.3
2000	2,431.2	87.0	83.9	1,017.4	35.4	317.5	3,972.3
2001	2,450.2	85.0	84.3	1,025.6	37.2	306.1	3,988.4
2002	2,533.7	88.2	82.9	1,020.3	28.8	314.7	4,068.7
2003 <sup>r</sup>	2,549.0	86.1	88.7	915.4	39.6	290.0	3,968.8
2004 <sup>r</sup>	2,555.6	92.5	92.3	952.0	46.2	296.9	4,035.4
2005 <sup>r</sup>	2,474.6	105.7	84.6	927.8	53.5	288.4	3,934.5
2006 <sup>r</sup>	2,393.6	102.9	84.1	958.8	28.8	332.6	3,900.8
2007 <sup>r</sup>	2,434.2	94.6	76.6	971.8	30.7	328.1	3,936.0
2008 <sup>r</sup>	2,080.2	102.4	78.0	936.0	25.6	327.3	3,549.4
2009 <sup>r</sup>	2,062.2	87.0	67.6	802.8	4.7	348.2	3,372.5
2010 <sup>p</sup>	2,090.5	97.0	70.2	800.2	4.2	297.2	3,359.3

<sup>a</sup> Includes both vehicle and aviation gasoline.

<sup>b</sup> Does not include the ethanol. Ethanol use in motor gasoline is shown in the Renewable Energy chapter and later in this chapter.

<sup>c</sup> Liquefied petroleum gas (propane).

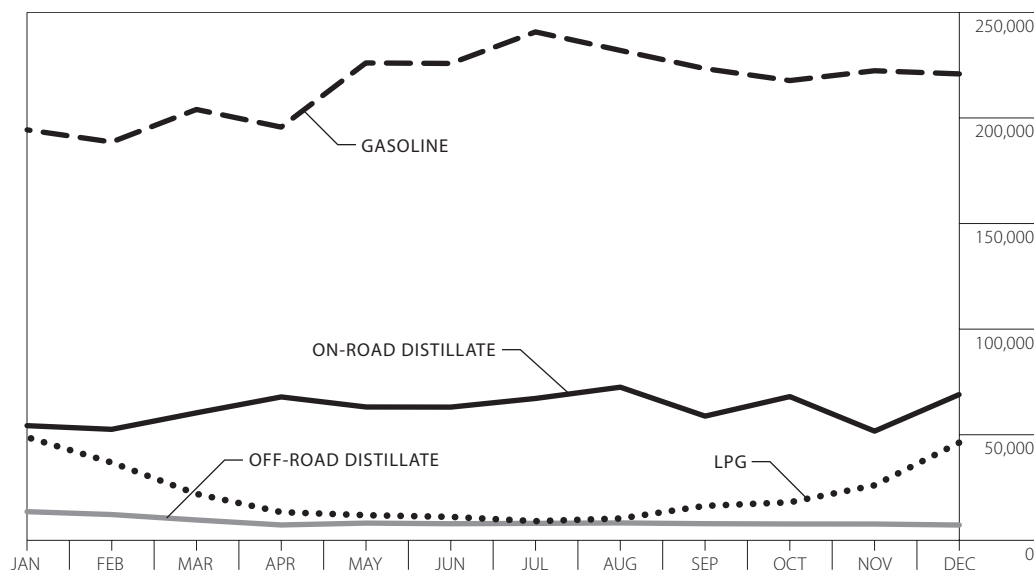
<sup>p</sup> Preliminary estimates.

<sup>r</sup> Revised.

**Source:** Wisconsin Department of Commerce, Bureau of Petroleum Inspection, *Report on Petroleum Products Inspected and Delivered to Wisconsin* (1970-1995); Wisconsin Department of Revenue, *Collection of Petroleum Inspection Fees* (1996-2006) and *Fuel Tax Statistical Report* (1996-2009); U.S. Department of Energy Form EIA-782C, "Monthly Report of Petroleum Products Sold into States for Consumption" (1983-2009) [http://www.eia.gov/oil\\_gas/petroleum/data\\_publications/prime\\_supplier\\_report/psr\\_historical.html](http://www.eia.gov/oil_gas/petroleum/data_publications/prime_supplier_report/psr_historical.html); WI Office of Energy Independence telephone surveys of airport fixed base operators and railways; unpublished data from the National Agriculture Statistics Service (2005-2009).

# Petroleum Product Deliveries to Wisconsin, by Month

2010 THOUSANDS OF GALLONS



Month	Off-Road Distillate <sup>a</sup>	On-Road Distillate <sup>b</sup>	LPG <sup>c</sup>	Gasoline <sup>d</sup>
January	13,260	53,976	48,511	194,034
February	11,889	52,239	36,493	188,276
March	9,316	60,062	21,658	203,679
April	6,964	67,581	13,026	195,321
May	7,843	62,823	11,589	225,717
June	7,542	62,767	10,792	225,483
July	7,722	66,859	8,765	240,409
August	7,927	72,193	10,041	231,644
September	7,569	58,486	16,001	223,013
October	7,429	67,735	17,698	217,372
November	7,405	51,355	25,742	222,026
December	6,936	68,722	45,928	220,529
<b>Total</b>	<b>101,802</b>	<b>744,797</b>	<b>266,244</b>	<b>2,587,504</b>

<sup>a</sup> Kerosene, No. 1 and No. 2 fuel oil used for heating and processing, jet fuel and aviation gasoline used for flying. Does not include non-taxed diesel fuel used on farms. Numbers in italics are incomplete data because some data are withheld by the federal Energy Information Administration to protect reporter identification.

<sup>b</sup> On-road diesel fuel sales.

<sup>c</sup> Liquefied petroleum gas (propane).

<sup>d</sup> Vehicle gasoline sales; does not include aviation gasoline. Includes ethanol.

**Source:** Wisconsin Department of Revenue, *Monthly Motor Fuel Consumption Report* (2008-2010); U.S. Department of Energy, Form EIA-782C, "Monthly Report of Petroleum Products Sold into States for Consumption" (2010)  
[http://www.eia.gov/oil\\_gas/petroleum/data\\_publications/prime\\_supplier\\_report/psr\\_historical.html](http://www.eia.gov/oil_gas/petroleum/data_publications/prime_supplier_report/psr_historical.html).

In general, gasoline sales peaked during the summer vacation months, while deliveries of fuels used for heating (off-road distillate and LPG) peaked during winter months.

Figures will not match the consumption figures in earlier pages in this chapter because deliveries do not always translate to sales during the same time frame.

A map of Wisconsin's petroleum pipelines can be found in the Map Appendix at the back of the book.

# Wisconsin Production and Use of Ethanol in Reformulated Gasoline, E10 and E85

ETHANOL  
PRODUCTION  
**10.2%**

In 2010, Wisconsin ethanol production increased 10.2 percent while consumption increased by 7.2 percent over 2009.

The increase in ethanol usage in Wisconsin is related to a number of factors including: major oil companies blending ethanol with gasoline at retail locations to stretch gasoline; retail outlets where E85 is sold are likely to sell E10 at their other pumps; and the overall saturation of Wisconsin's gasoline by ethanol statewide.

Ethanol is one of the few energy sources that Wisconsin exports.

## 1994-2010 THOUSANDS OF GALLONS

Year	Production	Consumption			Total
		RFG <sup>a</sup>	E10 <sup>b</sup>	E85 <sup>c</sup>	
1994	NA	NA	13,331	9	13,340
1995	NA	38,048	10,461	17	48,526
1996	NA	49,784	6,973	36	56,793
1997	NA	49,460	8,012	54	57,526
1998	NA	66,571	4,877	58	71,506
1999	NA	67,400	7,937	63	75,400
2000	NA	70,724	23,080	43	93,847
2001	NA	67,449	18,458	32	85,939
2002	15,529	71,152	17,026	48	88,226
2003	76,947	77,302	23,536	86	100,924
2004	106,886	74,816	27,617	106	102,539
2005 <sup>r</sup>	171,764	73,046	49,191	723	122,960
2006 <sup>r</sup>	210,386	77,614	50,498	2,302	130,414
2007 <sup>r</sup>	283,800	69,963	86,472	4,800	161,235
2008 <sup>r</sup>	447,300	68,047	143,849	5,100	216,996
2009 <sup>r</sup>	413,348	74,142	150,347	5,200	229,689
<b>2010<sup>p</sup></b>	<b>455,597</b>	<b>77,968</b>	<b>173,351</b>	<b>3,000</b>	<b>254,319</b>

<sup>a</sup> RFG is reformulated gasoline. Starting January 1, 1995, the federal government mandated its sale in six southeastern Wisconsin counties to comply with the Clean Air Act. Ethanol is used to provide the oxygenate required in RFG. The RFG in this table represents the ethanol in RFG, a very small portion of overall RFG sales in Wisconsin.

<sup>b</sup> E10 is a motor fuel blend consisting of 10 percent ethanol and 90 percent conventional gasoline (non RFG).

<sup>c</sup> E85 is a motor fuel consisting of 85 percent ethanol and 15 percent gasoline.

<sup>p</sup> Preliminary.

<sup>r</sup> Revised.

NA – Not available.

**Source:** Wisconsin Department of Revenue; Wisconsin State Energy Office survey of E85 distributors; U.S. Department of Energy, Form EIA-782C, *Monthly Report of Petroleum Products Sold into States for Consumption* (2010)  
[http://www.eia.gov/oil\\_gas/petroleum/data\\_publications/prime\\_supplier\\_report/psr\\_historical.html](http://www.eia.gov/oil_gas/petroleum/data_publications/prime_supplier_report/psr_historical.html).

# Wisconsin Liquefied Petroleum Gas Use, by Economic Sector

1970-2010 MILLIONS OF GALLONS AND PERCENT OF TOTAL

Year	Residential		Commercial		Industrial		Agricultural <sup>a</sup>		Transportation		Total
1970	190.9	70.9%	23.8	8.8%	28.2	10.5%	26.2	9.7%	NA	0.0%	269.1
1975	176.5	64.7%	36.5	13.4%	29.5	10.8%	30.1	11.0%	NA	0.0%	272.6
1980	176.3	66.7%	33.5	12.7%	17.5	6.6%	36.9	14.0%	NA	0.0%	264.2
1985	158.2	65.5%	29.4	12.2%	19.3	8.0%	34.6	14.3%	NA	0.0%	241.5
1990	162.1	62.3%	36.5	14.0%	35.7	13.7%	25.9	10.0%	NA	0.0%	260.2
1995	203.8	62.9%	48.0	14.8%	35.0	10.8%	30.9	9.5%	6.1	1.9%	323.8
1996	219.5	61.3%	51.7	14.4%	43.9	12.3%	36.8	10.3%	6.0	1.7%	357.9
1997	210.3	63.2%	48.7	14.6%	35.0	10.5%	33.1	9.9%	5.8	1.7%	332.9
1998	183.5	64.2%	42.4	14.8%	30.1	10.5%	24.2	8.5%	5.7	2.0%	285.9
1999	197.9	64.3%	45.8	14.9%	31.3	10.2%	27.6	9.0%	5.1	1.7%	307.7
2000	211.0	66.5%	47.2	14.9%	28.7	9.0%	25.3	8.0%	5.3	1.7%	317.5
2001 <sup>r</sup>	204.0	66.7%	45.8	15.0%	28.3	9.2%	23.5	7.7%	4.6	1.5%	306.1
2002	213.1	67.7%	47.6	15.1%	26.0	8.3%	24.0	7.6%	4.0	1.3%	314.7
2003 <sup>r</sup>	198.9	68.6%	43.7	15.1%	20.7	7.1%	22.8	7.9%	3.8	1.3%	290.0
2004 <sup>r</sup>	203.2	68.5%	44.7	15.1%	21.2	7.1%	24.1	8.1%	3.7	1.2%	296.9
2005 <sup>r</sup>	198.5	68.8%	43.6	15.1%	20.7	7.2%	22.6	7.8%	3.0	1.0%	288.4
2006 <sup>r</sup>	228.3	68.6%	50.2	15.1%	23.8	7.1%	27.1	8.1%	3.2	1.0%	332.6
2007 <sup>r</sup>	224.6	68.5%	49.4	15.1%	23.4	7.1%	28.3	8.6%	2.3	0.7%	328.1
2008 <sup>r</sup>	221.2	67.6%	48.7	14.9%	23.1	7.1%	31.8	9.7%	2.5	0.8%	327.3
2009 <sup>r</sup>	232.6	66.8%	51.2	14.7%	24.3	7.0%	37.8	10.9%	2.2	0.6%	348.2
2010 <sup>p</sup>	201.0	67.6%	44.2	14.9%	21.0	7.1%	28.7	9.7%	2.2	0.8%	297.2

LPG USE  
**14.6%**

Liquefied petroleum gas (LPG), (propane), use decreased 14.6 percent in 2010.

Agriculture sector numbers do not include agricultural processing plants; these are classified in the commercial sector.

<sup>a</sup> Starting with 2005 data, the SEO discontinued a per-acre approach to gathering fuel data for the agriculture sector and substituted data from the Wisconsin Department of Revenue and from the federal National Agriculture Statistics Service (NASS).

<sup>p</sup> Preliminary estimates.

<sup>r</sup> Revised.

NA – Not available.

**Source:** U.S. Department of Energy, Form EIA-25, "Prime Supplier's Monthly Report" (1974-2010) and Form EIA-782C,

"Monthly Report of Petroleum Products Sold into States for Consumption" (1983-2010)

[http://www.eia.gov/oil\\_gas/petroleum/data\\_publications/prime\\_supplier\\_report/psr\\_historical.html](http://www.eia.gov/oil_gas/petroleum/data_publications/prime_supplier_report/psr_historical.html); National Agricultural Statistics Service, unpublished data (2005-2010); Wisconsin Department of Revenue, *Monthly Motor Fuel Consumption Report* (2008-2010).